

1 Attorney Docket No. 79790

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3 A SYSTEM AND A METHOD OF SOLID STORAGE AND DISSOLUTION OF  
4 A CATHOLYTE FOR USE IN ELECTROCHEMICAL CELL

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6 ABSTRACT OF THE DISCLOSURE

7 A system and a method of storage and dissolution of solid  
8 catholyte are provided. The system and the method employ a solid  
9 medium having a controlled surface from which solid catholyte  
10 particles suspended within a matrix of encapsulating species are  
11 dissolved and hydrolyzed producing hydrogen peroxide to be used  
12 in semi fuel cells of undersea vehicles. Encapsulating species  
13 are also dissolved and hydrolyzed rendering products completely  
14 usable in the semi fuel cell. Sodium peroxide is preferably used  
15 as the solid catholyte and potassium superoxide and/or sodium  
16 hydroxide are preferably used as encapsulating species.